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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,681	07/28/2003	Gilbert N. Riley JR.	112903.128US2	4491
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WILMER CUTLER PICKERING HALE AND DORR LLP 60 STATE STREET BOSTON, MA 02109			EXAMINER ONEILL, KARIE AMBER	
			ART UNIT	PAPER NUMBER
			1745	
			NOTIFICATION DATE	DELIVERY MODE
			10/04/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/628,681

Applicant(s)

RILEY ET AL.

Examiner

Karie O'Neill

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-90 is/are pending in the application.
- 4a) Of the above claim(s) 22-90 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Applicant's amendment filed on July 23, 2007, was received. Claims 1 and 11 were amended. Claims 22-90 have been withdrawn from consideration. Therefore, Claims 1-21 are pending in this office action.

2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action issued on January 25, 2007.

Claim Rejections - 35 USC § 112

3. The Claim rejections under 35 U.S.C. 112, second paragraph, with regard to Claims 1-21 are withdrawn, because the arguments pointing out where to find the definition of "arbitrary form factor" and "arbitrary configuration" in the specification were persuasive and independent Claims 1 and 11 have been amended.

Claim Rejections - 35 USC § 102

4. The Claim rejections under 35 U.S.C. 102(e), as rejected by Shinn et al. (US 2003/0114297), with regard to Claims 1 and 11-12 are withdrawn, because the arguments were persuasive.

5. The rejection of Claims 1-21 under 35 U.S.C. 102(e) as being anticipated by Chiang et al. (US 2003/0099884 A1), are maintained. The rejection is repeated below for convenience.

With regard to Claims 1, 11 and 12, Chiang et al. discloses a bipolar device having an arbitrary form factor by being self-organized and the topologies or morphologies of interpenetrating structures include being strut-like, sponge-like, or cellular, micellar, lamellar, isotropic or anisotropic (paragraph 0122), the article comprising: (a) a bipolar structure having an anode, a cathode and an electrolyte in contact with and separating the anode and cathode (paragraph 0104), wherein the anode and cathode are interpenetrating (paragraph 0019); (b) a cathode current collector (310) that is in electronic communication with the cathode component (300) (paragraph 0119 and Figure 3); (c) an anode current collector (330) that is in electronic communication with the anode component (320) (paragraph 0119 and Figure 3); wherein the bipolar article has a configuration corresponding to the arbitrary form factor, the configuration having a thickness that varies across the length or width of the article, each of the convexities or protrusions formed in the electrodes being sufficient to produce features with a thickness or width that are less than the maximum thickness of width of each electrode (paragraph 0112), as can be seen in Figures 2A-2D.

With regard to Claims 2 and 13, Chiang et al. disclose wherein the anode and cathode and electrolyte possess intrinsic characteristics such that the appropriate the anode and cathode particles spontaneously wire themselves and the electrolyte occupies all positions between the anode and cathode particles (paragraph 0199), and

wherein the cathode current collector is attractive to the cathode network and repulsive to the anode network, and the anode current collector is attractive to the anode network and repulsive to the cathode network (paragraph 0206).

With regard to Claims 3 and 14, Chiang et al. disclose wherein one or both of the anode and cathode current collectors comprises a coating providing a repulsive force between the current collector and the opposite anode or cathode network (paragraph 0206). Each current collector has a surface that will attract either the cathode or the anode and repel the other. One current collector can be coated with a thin layer of a conductive low refractive index material, which would attract a low refractive index material and repel a high refractive index material, while the opposing current collector would have a high refractive index, which would have the opposite effect (paragraph 0207).

With regard to Claims 4 and 15, Chiang et al. disclose coating the current collector with an electronically conducting material. Example 9 discloses the current collector coating as being a conductive polymer blend of PEDT-PSS and PTFE (paragraph 0247).

With regard to Claims 5 and 16, Chiang et al. disclose wherein the anode, electrolyte and cathode are sequentially deposited (paragraph 0219, Example 1).

With regard to Claims 6-10 and 17-21, Chiang et al. disclose a device comprising the bipolar article, wherein the bipolar article is a rechargeable battery, which can be incorporated into devices such cellular telephones, laptop computers and other consumer electronic products (paragraph 0006). To be incorporated into the device, the

battery would have to be conformal to at least one surface of the device so as to make a proper connection in order to be able to properly function. The laptop computer or cellular telephone would have cavity in which the battery would fill the space of the cavity while making the electrical connections in order to operate.

Double Patenting

6. The provisional rejection of Claims 1-21 on the ground of nonstatutory double patenting over claims 1, 6-8, 12-16, 20, 23 and 29-30 of copending Application No. 2003/0099884 A1 have been overcome. Claims 1, 6-8, 12-16, 20, 23 and 29-30 of copending Application No. 2003/0099884 A1 have been cancelled.

Response to Arguments

7. Applicant's arguments filed July 23, 2007, with respect to the rejection of Claims 1-21 by Chiang et al. (US 2003/0099884 A1), have been fully considered but they are not persuasive.

Applicant's principal arguments are:

(a) Chiang et al. does not disclose a bipolar article wherein the article as a whole has an arbitrary form factor.

(b) Chiang cannot serve as 35 U.S.C. §102(e) prior art unless Chiang's priority applications filed prior to July 26, 2002 properly support any subject matter that forms the basis of the rejection.

In response to Applicant's arguments, please consider the following comments:

(a) Chiang et al. discloses a bipolar device having an arbitrary form factor because it is self-organized and the topologies or morphologies of interpenetrating structures include being strut-like, sponge-like, or cellular, micellar, lamellar, isotropic or anisotropic (paragraph 0122).

(b) Chiang (US 2003/0099884 A1) claims priority to provisional application 60/308,360 , filed July 27, 2001, and discloses, in the specification, information that reads on Claims 1-4, 6-15 and 17-21 of the instant application. Chiang (US 2003/0099884 A1) is also a continuation-in-part of U.S. Ser. No. 10/021,740, filed October 22, 2001, and discloses, in the specification, information that reads on Claims 1-2, 5-6, 10-12, 16-17 and 21 of the instant application.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1745

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karie O'Neill whose telephone number is (571) 272-8614. The examiner can normally be reached on Monday through Friday from 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Karie O'Neill
Examiner
Art Unit 1745

MARK RUTHKOSKY
PRIMARY EXAMINER



9/28/07

KAO